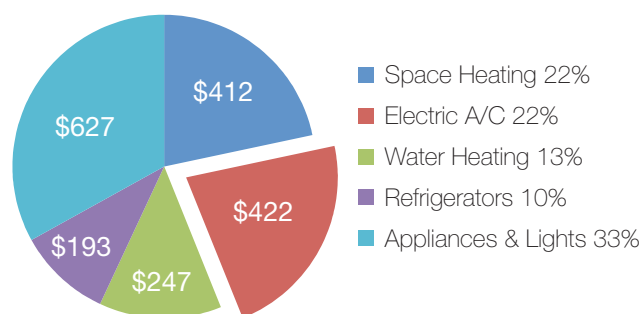


In Arkansas, almost one-fourth of our annual utility costs are paid to keep us cool (see figure 1). There are many ways to reduce cooling costs while maintaining comfort. First, reduce heat gain by reflecting or blocking sunlight from the home; second, reduce heat-generating sources in the home; and third, remove built-up heat in the home. Reducing summertime humidity is also needed to stay comfortable. It is important to maintain and repair the air conditioning system (including ducts) to get the most from your air conditioning system. Also, when replacing your old air conditioner, make sure that the new system is properly sized and installed so it will provide years of cool, dry air.

figure 1

Arkansas Average Annual Utility Costs



Source: Energy Information Administration 2001 Residential Energy Consumption Survey Applying 2007 Average Utility Costs

No Cost

- **Set your air conditioner's thermostat** to the highest comfortable temperature setting during the day. For every degree you raise the setting, you reduce cooling costs 3 to 5 percent.
- **Don't place warm appliances (such as lamps or TV sets) near the air conditioning thermostat** because the warmth will cause the air conditioner to think the whole house needs extra cooling.
- **Ceiling fans cool people, not rooms.** Turn off the ceiling fan when the room is unoccupied. To save energy when using a ceiling fan, turn up the thermostat a degree or two.

- **Shut the shades** and drapes on the sunny side of the home to keep out the sun's heat. For the most benefit, drapes should be made of a tightly woven, light-colored, opaque fabric.
- **Make sure that your attic is adequately ventilated** to remove excess heat. Natural attic ventilation works best by

Myths and Facts

Myth: Setting your air conditioner thermostat to its lowest setting will cool the home faster.

Fact: The thermostat is not a throttle, setting it lower than necessary will not cool the home any faster.

Myth: The bigger the air conditioner the better it cools the house.

Fact: Air conditioners cool and dehumidify. An oversized air conditioner can quickly cool a home, but results in it frequently cycling on and off, which doesn't allow it enough time to remove moisture and may make the house feel clammy. A properly sized A/C will operate for a longer period of time during the hottest days, which will remove that uncomfortable moisture. Although a properly sized unit will run longer, it will be more efficient and use less energy.

Myth: The size of the house is all that's needed to size an air conditioning system.

Fact: A good load calculation program takes into account window types, window orientation and window shading; insulation of ceiling, walls and floor; air leakage and many other factors such as the color of the roof and the number of occupants. Using the square footage of a home to size an air conditioner is outdated and will almost always yield an oversized system. Don't use a contractor who wants to size your unit solely on the square footage of your house. Require a Manual J or equivalent analysis before purchasing.

pulling air through unobstructed soffit vents and exhausting the hot air through ridge vents, turbine vents, or gable vents.

- **Reduce heat and moisture** that result from indoor cooking. Keep the lids on pans, especially when simmering or boiling food for a long time. Use smaller appliances such as a toaster oven or microwave, or cook outdoors whenever possible.
- **Keep your air conditioner free of obstructions** and vegetation so that air can flow freely. Clean the outdoor condenser every year with a strong stream of water to remove dirt, leaves, grass, etc.
- **Don't block the flow.** Move furniture or other objects away from the registers to prevent the blockage of cool air.
- **Keep your interior lights low or, if possible, completely off during daylight hours.** Light fixtures generate heat, and therefore add to your cooling costs.

Low Cost

- **Reflective window coatings** keep the sunlight from adding heat to your home. More than 40 percent of the unwanted heat that builds up in your home comes in through the windows. Sun-control films can reflect as much as 80 percent of the incoming sunlight; however, they also darken the room. Look for a window film that both reduces summer solar heat gain and reduces winter heat loss. Don't tint south facing windows because these contribute beneficial solar heat in the wintertime.
- **Seal around windows, doors, electrical outlets and openings or holes in exterior walls.** Don't let hot air leak into the home!
- **Provide shading with trees and other vegetation** or exterior shades or awnings.
- **Use bathroom and kitchen exhaust fans** to remove heat and humidity when bathing and cooking.
- **Install a programmable thermostat.** A programmable thermostat costs about \$100, is easy to install and can save from \$70 to \$115 a year on your home heating and cooling costs, easily paying for itself.
- **Change the furnace filter every month.** This will help your air conditioner run more efficiently, keep your air cleaner and prolong the life of your system. A dirty or clogged filter will demand more energy and slow down the cooling process.

- **An annual tune-up** of your air conditioner by a service expert can improve your unit's efficiency by as much as 20 percent as well as lengthen its performance life.

Investment

- **Add attic insulation.** The attic is the best place to start insulating. If your attic has six inches or less of insulation (no matter what type) you need to add 6- to 8-inches more to bring it up to R-30 or R-38 in northwest Arkansas.
- **Seal the ductwork.** Ask your HVAC professional to check for duct leakage. Sealing the leaks can reduce cooling costs from 15 to 20 percent or more. Have the ducts sealed with duct mastic or UL-approved duct-sealing tape (don't accept what is commonly called "duct tape"). Make sure that the ducts are insulated and foil tape is used to vapor-seal the insulation.
- **New, energy-efficient appliances** generate less heat and use less energy. When it's time to purchase new appliances, make sure they are energy efficient. Compare the operating costs on the EnergyGuide labels on refrigerators, dishwashers and dryers. Also, look for the ENERGY STAR® label.
- **Install windows with low-e and low solar heat gain coatings** if your windows are in disrepair and need replacing; this can cut cooling costs by 38 percent. This type of window is most valuable on sunny, west facing windows.
- **An ENERGY STAR® qualified air conditioner**, when properly sized and installed, can save consumers 30 to 40 percent on cooling bills. Insist that a heating and cooling load analysis (Manual J or equivalent) be performed on your home to make sure that you are not buying a larger air conditioning system than you need. Buy a central air system with a Seasonal Energy Efficiency Ratio (SEER) of 13 or higher. Also look for the ENERGY STAR® label.

This Fact Sheet was developed for Energy Efficiency Arkansas (EEA), a partnership between the Arkansas Energy Office and Arkansas's investor-owned electric and gas utilities and electric cooperatives, to provide Arkansans with unbiased information about cost effective energy efficient practices, improvements and technologies. For further information go to www.EnergyEfficiencyArkansas.org.

